Leveraging Automation to Increase Time Savings for Processing RNBs

Saif Siamwalla, Renata Panchal, Michael Buckley, Joseph Lengfellner
Memorial Sloan Kettering Cancer Center

Background

MSK uses its Clinical Trials Management System (CTMS) to manage protocol information and study budgets, but relies on an additional system known as Application for Research Charges (ARC) to process and reconcile Research Non-Billable (RNB) information. Both systems require RNB data to be inputted in order to carry out their independent functions, just at different time points. Traditionally, this would require hours of repetitive manual data entry by the budgets team, who would type every single RNB procedure into both CTMS and ARC. Along with prolonging the time in which RNBs would be processed, this method also introduced significant risk of data entry error.

Goals

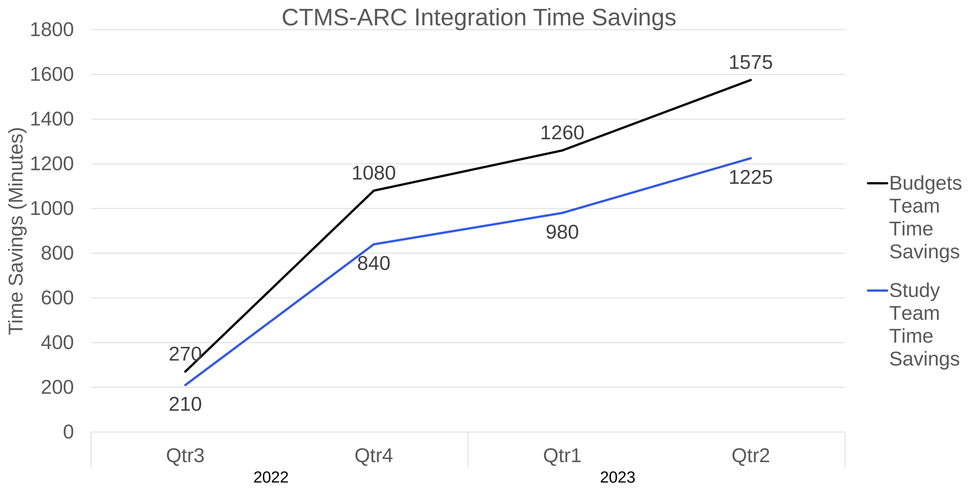
For this two-phase initiative, the elimination of double data entry was prioritized by leveraging CTMS as a primary source and pulling its data into a view for automatic injection into ARC. Since the successful go-live of Phase I for new protocols on October 17, 2022, Phase II is currently targeted to automate manual data entry tasks for protocol and budget amendments. The goals of both phases are the same:

- to improve data quality
- reduce errors from manual data entry
- increase time savings
- streamline productivity for budget staff

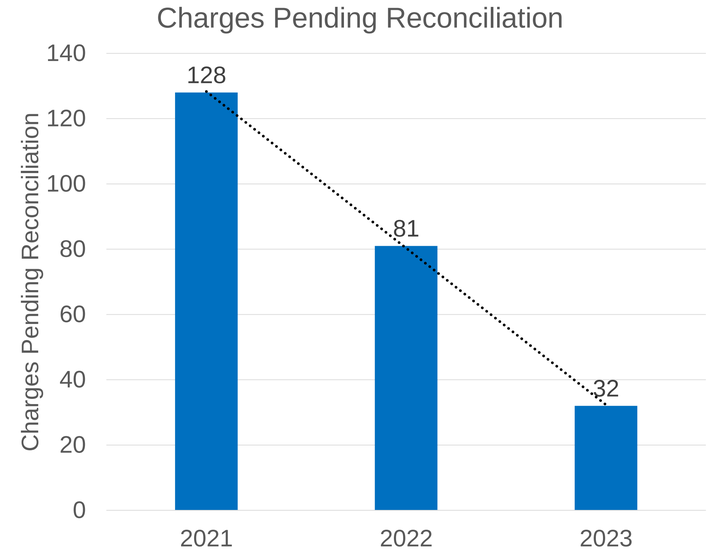
Results

Each study pushed from CTMS to ARC saves 45 minutes in manual work for the budgets team and 30 minutes for the study team. Since the first go-live, a total of 119 studies have been published, amounting to a total of 5,310 minutes for the budgets team and 4,130 minutes for the study team in time savings. In addition, the integration has made an impact from a compliance perspective, since the previous process caused errors due to manual data entry.

Total of 9,440 minutes or 157 hours in time savings for both the budgets and study teams



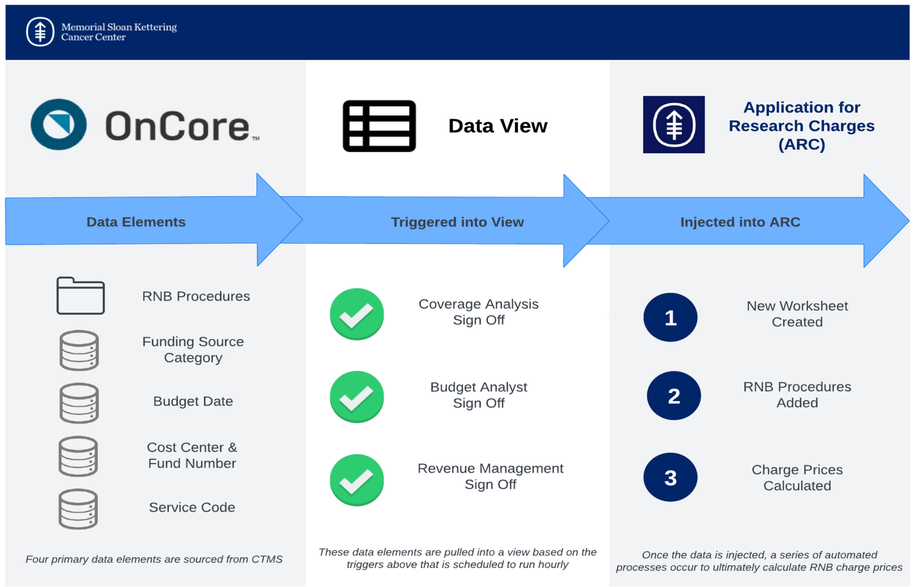
The total charges that were pending reconciliation reduced following the integration. This indicated that a fewer number of studies required reconciliation due to fewer data entry errors. By selecting a monthly time frame and analyzing the change in charges pending reconciliation, charges requiring reconciliation reduced in line with the implementation of the integration, highlighting that the integration reduced manual data errors.



Solutions and Methods

The approach in addressing the challenges above was multifold:

- The triggers: There are three sign-off points within CTMS that indicate when a protocol is ready to have data injected into ARC.
- The data view: A view picks up the data when the triggers are entered and makes it available for the injection into ARC.
- The injection: A new worksheet is created within ARC based on four integrated fields taken from CTMS: funding source category, budget date, current cost center number and fund number, and the service code. From these four fields, the rate bases are automatically calculated for each RNB procedure within the protocol.
- The exceptions report: For every procedure entered on a new protocol, a Tableau dashboard captures the studies with RNBs and assigns it a status according to the integration.



Future Directions

We have learned that eliminating steps for manual data entry has benefits that supplement the expected process improvements, such as opening a gateway for future integrations. With the data view, triggers, and mapping created in Phase I of the integration, we have a robust foundation now to introduce amendments within the automated process for Phase II. By Q3 2023, we expect to be live with both phases of the integration and entirely reliant on CTMS as a single point of data entry for both new protocols and amendments. Ultimately, this would increase time savings for both the budgets and study teams, as well as simultaneously increase data accuracy and reduce manual data entry errors by fully automating the injection of ARC data based on a triggers within CTMS. Phase II of the integration will include the following components based on budget amendments:

- Adding new RNBs
- Removing previously submitted RNBs
- Updating incorrectly entered service codes
- Updating missing professional charges